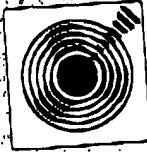


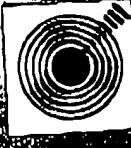
EXHIBIT A

SyQuest



SQ555, SQ5110 AND SQ5110C REMOVABLE
CARTRIDGE DISK DRIVE

BEST AVAILABLE COPY



NOTICE TO USERS
 SyQuest Technology makes no representations with respect to the contents hereof, and
 specifically disclaims any implied warranties of merchantability or fitness for any purpose.

SyQuest Technology reserves the right to revise this document and to make changes from time to time without
 obligations to notify any person of such revisions and changes.
 While every effort has been made to ensure that the information provided herein is correct, please notify us
 in the event of any errors. Please write your comments, your name, address and telephone number (includes
 name and # of the document) and mail to:

SyQuest Technology
 4071 Baytree Parkway
 Fremont, CA 94558-6516
 510-226-4000
 510-251-1736

Attention: Technical Publications
 1100 4135

On IBM PC and PC compatibles operating under MS DOS or PC DOS like operating systems, the SyQuest
 recommends that an
 can be accessed and formatted in a variety of ways. For best results, SyQuest recommends that the
 "approved" host bus adapter and the SyQuest utility software be used to install and partition the drive.

BULLETIN BOARD

SyQuest Technology currently provides data in service for:

- Product update information
- Technical Bulletins

To access the bulletin board, you must have:

- A 386, 1200, 2400 or 3000 baud modem
- Telecommunications software, configured to 8 data bits, 1 stop bit and no parity
- To view or transfer data, call (510) 655-0473 and answer questions to the best of your knowledge. There are
 message areas dedicated to the different facets and varied platforms on which the SyQuest drives are used.

The file area also has downloadables files for the platforms as well as helpful utilities. The system supports
 PC, PC-XT, PC-AT and PS/2 as registered trademarks of International Business Machines Corporation.

IBM is a registered trademark of International Business Machines Corporation.

PC is a registered trademark of Apple Computer, Incorporated.

Information provided herein is copyrighted. This document may not, in whole or part, be copied,
 photographed, translated, or reproduced in any form or by any means, electrical or mechanical, without prior
 written permission from SyQuest Technology.

SyQuest Technology

MANUAL CONFIGURATION

This table below lists all changes issued for this S0555051015Q5110C Hardware Installation User's Guide.

PAGES	DATE	REVISION ID
Cover, I, II, 1-2, 2-2, 2-4, 2-5, 2-7, 2-8, 2-10, 2-11, 2-12, 2-13, 2-17, 2-18, 3-7, 5-1, 5-4		A

Copyright 1992 SyQuest Technology

All Rights Reserved.

2-19

Figure 2-11. DC Power Connector Pin Assignment 3-3

Figure 3-1. Inserting Removable Cartridge 3-4

Figure 3-2. Front Panel LED's and Controls 3-6

Figure 3-3. Cartridge With Protect Cylinder 3-7

Figure 3-4. Cartridge Identification Label Locations 4-3

Figure 4-1. Spindle Motor Hub 2-18

LIST OF TABLES

Table 2-1. DC Power Pin Connections 5-3

Table 5-1. Front Panel LED Indicators 5-4

Table 5-2. Power on Error Code Description 5-5

Table 5-3. LED Error Reporting Table SQ5E5 5-6

APPENDICES**LIST OF FIGURES**

A Driver software for SyQuest in Macintosh A-1

B List of SyQuest Approved Host Bus Adapters B-1

C Commonly Asked Questions about SyQuest and Macintosh C-1

D Commonly Asked Questions About SyQuest and PC Compatibles D-1

Figure 2-1. Front Panel Label 2-7

Figure 2-2a. SQ55 Cable Connectors 2-8

Figure 2-2b. SQ5110 Cable Connectors 2-9

Figure 2-3. SCSI ID Unit Select Jumper Location 2-9

Figure 2-4. Party Check Jumper Location 2-10

Figure 2-5. Manufacturing Test Jumper Locations 2-11

Figure 2-6. Terminalizing Resistor Pack Location 2-12

Figure 2-7. Mounting Holes and Rails 2-14

Figure 2-8. Recommended Drive Orientation 2-15

Figure 2-9. Physical Mounting Dimensions 2-16

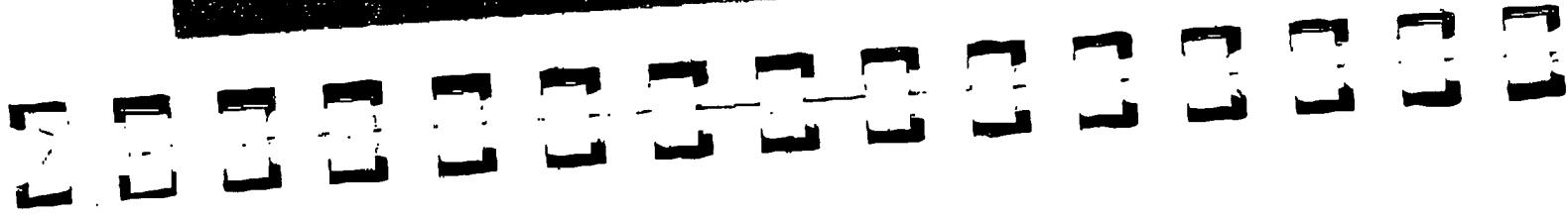
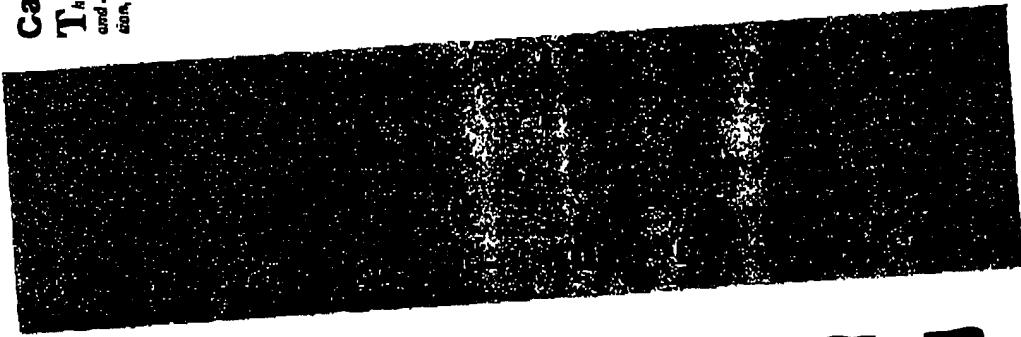
Figure 2-10. Recommended Drive Slot Locations 2-17

TABLE OF CONTENTS

1. INTRODUCTION	2.5 MOUNTING CONFIGURATION	1-14
1.1 KEY FEATURES	2.6 PREPARING THE COMPUTER	2-16
1.2 BENEFITS OF REMOVABILITY	2.7 DRIVE LOCATIONS	2-17
1.3 LAYOUT OF THE MANUAL	2.7.1 Drive Locations	2-17
2. DRIVE INSTALLATION	2.7.2 Installing the Drive	2-19
2.1 PRELIMINARY STEPS	2.8 HOST BUS ADAPTERS	2-20
2.1.1 Unpacking	2.8.1 Installation Software For DOS Systems	2-20
2.1.1.1 Shipping Controls	2.8.2 Preparing A Cartridge On An Approved MBA Using SQPREP	2-21
2.1.2 PRECAUTIONS	2.9 APPLE MACINTOSH INSTALLATION	2-25
2.2 ESD Caution	3. CARTRIDGE HANDLING	3-2
2.2.1 ESD Considerations	3.1 CARTRIDGE FEATURES	3-3
2.3 INSTALLATION	3.2 INSERTING/REMOVING THE DATA CARTRIDGE	3-3
2.3.1 Installation Precautions	3.2.1 Inserting the Data Cartridge	3-4
2.3.2 Requirements for Installation	3.2.2 Removing the Data Cartridge	3-4
2.3.3 Drive Identification	3.2.3 Changing a Cartridge	3-6
2.3.4 INSTALLING THE SYQUEST DRIVE	3.3 WRITE PROTECTING THE CARTRIDGE	3-6
2.4 Internal Installation	3.3.1 Cartridge Write Protect Indicator	3-7
2.4.1 Installation of the SyQuest Drive into a Computer	3.4 OPERATING SYSTEM VERSIONS	3-7
2.4.2 Installation of the SyQuest Drive	3.5 CARTRIDGE IDENTIFICATION	3-7
2.4.3 External Installation	3.6 SQ400 (44 MB) CARTRIDGE	4-2
2.5 DRIVE PREPARATION	4. MAINTENANCE	4-2
2.5.1 Connector Locations	4.1 INTRODUCTION	4-2
2.5.2 SCSI ID Jumper	4.1.1 Precautions	4-3
2.5.3 Party Check Jumper	4.1.2 CLEANING REQUIREMENT	4-4
2.5.4 Manufacturing Test Jumpers	4.2 CLEANING EQUIPMENT	4-4
2.5.5 SCSI Terminating Resistor Pads	4.3 TROUBLE SHOOTING TECHNIQUES	5-2
2.5.6 Mounting Rails	5.1 TROUBLE SHOOTING PRECAUTIONS	5-1

Cartridge Handling

This chapter describes the features and handling of the SyQuest SQu09 and SQu09 Data Cartridge. Detailed information is presented for the insertion, removal and write protection of the data cartridge.



Cartridge Handling**Cartridge Handling****CARTRIDGE HANDLING****3.1 CARTRIDGE FEATURES**

The SyQuest cartridge contains a precision magnetic disk assembly, identical to that contained in a flat hard drive. To open the cartridge properly, follow the handling instructions below.

- Cartridges for the SCS110 have yellow write protect tabs; cartridges for the SCS555 have red write protect tabs.

• Always keep the cartridge in its protective case when not in use. This will protect the cartridge from dust and excessive shock damage.

• Do not drop the cartridge. This may cause head crashes and loss of stored data.

• Do not use a bulk tape eraser to erase the cartridge.

• Do not use a bulk tape eraser to magnetic fields. This could result in loss of recorded data or set the cartridge in close proximity to magnetic fields.

• Do not set the cartridge on media surface.

• Do not set the cartridge's media surface on the cartridge's media surface.

• Do not apply labels that will interfere with the cartridge door operation.

• Do not expose the cartridge to temperatures outside its operating range of -40°F to 158°F (-40°C to +70°C). Allow the cartridge to stabilize at room temperature before inserting it in the disk drive.

• Do not expose the cartridge to vibration in which it will be used for approximately 1 hour (in its protective case) will allow the cartridge to stabilize.

CAUTION • THIS PRECAUTION INCLUDES SITUATIONS SUCH AS MOVING A CARTRIDGE BETWEEN A COLD AUTOMOBILE TO A WARM OFFICE, A WARM AUTOMOBILE TO AN AIR CONDITIONED OFFICE, OR ANY SIMILAR CIRCUMSTANCE.

This may contaminate the disk surface resulting in severe damage to the cartridge.

• Do not leave the cartridge partially inserted in the drive.

• After turning off the computer, wait at least 1 minute before removing the cartridge.

• Always remove the cartridge from the drive before repairing the computer system.

• Do not use any cleaners or lubricants on the cartridge.

• Do not write on the cartridge label with graphite pencils. The graphite dust from the pencils may contaminate the disk surface.

• Do not write on the cartridge label with graphite pencils. The graphite dust from the pencils may contaminate the disk surface.

• Avoid performing operations among different versions of your operating system. This may result in loss of data.

3.2 INSERTING/REMOVING THE DATA CARTRIDGE

- **CAUTION •** The SyQuest disk drive has two front panel LED's (Green and Amber) which indicate the operating condition of the disk drive. Please follow the procedure below to insert and remove the data cartridge.

Use and Handling Precautions: For long and trouble-free operation, please adhere to the precautions printed on the back cover of the data cartridge case.

3.2.1 Inserting the Data Cartridge**DO NOT USE PENCIL AND/OR GRAPHITE WRITING PENCILS TO WRITE ON THE DATA CARTRIDGE.****CAUTION •**

- **CAUTION •** DO NOT USE PENCIL AND/OR GRAPHITE WRITING PENCILS TO WRITE ON THE DATA CARTRIDGE.

3.2.1 Inserting the Data Cartridge**DO NOT USE PENCIL AND/OR GRAPHITE WRITING PENCILS TO WRITE ON THE DATA CARTRIDGE.****CAUTION •**

- **CAUTION •** DO NOT USE PENCIL AND/OR GRAPHITE WRITING PENCILS TO WRITE ON THE DATA CARTRIDGE.

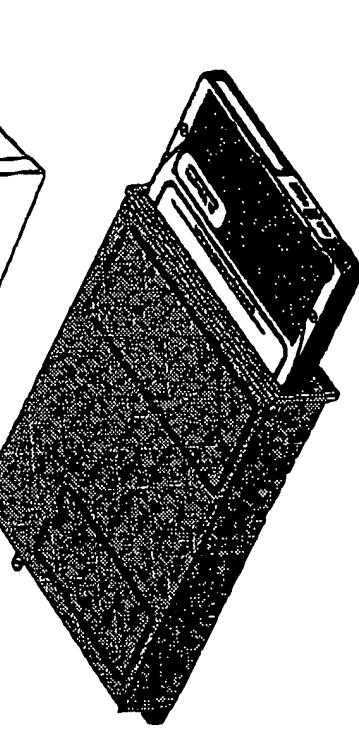


Figure 3-1: Inserting Removable Cartridge

- Hold the cartridge so that the hand access door is toward the drive and access to the write protect switch is on the bottom of the cartridge.

NOTE •

- The label area of the cartridge should be facing up and the Write Protect selector should be facing down.

Cartridge Handling

Cartridge Handling
 When the cartridge slides into the drive and comes to a stop, the load lever to the right will flip up with the front panel. This drive

- If necessary, push the load lever to the left until it is flush with the front panel. When the cartridge is fully engaged, the Stop/Start button will pop out slightly.

The Amber LED light starts to flash as the drive begins to spin up the cartridge disk.
 When the Amber LED light goes out and the Green LED turns on to a steady condition, the cartridge is ready for use.

3.2.2 Removing the Data Cartridge

Maintain power to the computer and the SyQuest drive before attempting to remove the SQ400 or SQ800 cartridge from the drive.

CAUTION •

IF THE POWER HAS BEEN REMOVED FROM THE COMPUTER AND THE DRIVE, WAIT AT LEAST ONE (1) MINUTE BEFORE PROCEEDING TO INSURE THAT THE CARTRIDGE HAS STOPPED SPINNING COMPLETELY.

To remove the cartridge, press the Stop button as shown in Figure 3-2.

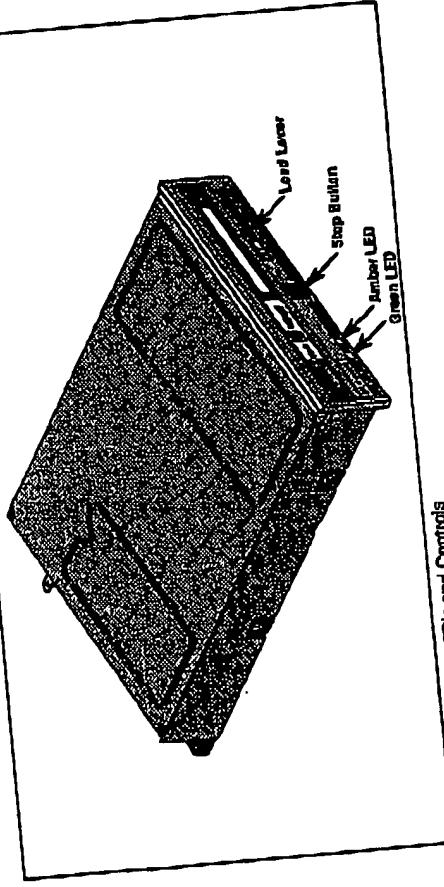


Figure 3-2. Front Panel LED's and Controls

- CAUTION •
DO NOT PROCEED UNTIL THE AMBER LED LIGHT ON THE FRONT PANEL GOES OUT. THIS TAKES 10 TO 20 SECONDS.

When the Amber LED goes out, push the load lever to the right until it is flush with the front panel. This drive will now eject the cartridge.

- **CAUTION •**
THE CARTRIDGE WILL EJECT IMMEDIATELY. PLACE YOUR HAND IN FRONT OF THE DOOR TO PREVENT THE CARTRIDGE FROM ACCIDENTALLY DROPPING OUT AS IT EJECTS.

- Remove the cartridge and place it in the protective case.

3.2.3 Changing a Cartridge

If you are not using a software driver that allows the system to recognize data disk cartridge interchangeably, the operating system must be updated after the cartridge is inserted. If a cartridge is removed and a new cartridge is inserted, the operating system may NOT read the directory from the new cartridge. It uses the directory from the old cartridge. If you are not using a software driver that allows the system to recognize data disk cartridge interchangeably, the operating system must be updated with its new cartridge information. The operating system must be made aware of the new cartridge. It uses the directory from the new cartridge that has been inserted.

If you are not using a software driver that allows the system to recognize data disk cartridge interchangeably, the operating system must be updated after the cartridge is inserted. If a cartridge is removed and a new cartridge is inserted, the operating system may NOT read the directory from the new cartridge. It uses the directory from the old cartridge. If you are not using a software driver that allows the system to recognize data disk cartridge interchangeably, the operating system must be updated with its new cartridge information. The operating system must be made aware of the new cartridge. It uses the directory from the new cartridge that has been inserted.

If you are not using a software driver that allows the system to recognize data disk cartridge interchangeably, the operating system must be updated after the cartridge is inserted. If a cartridge is removed and a new cartridge is inserted, the operating system may NOT read the directory from the new cartridge. It uses the directory from the old cartridge. If you are not using a software driver that allows the system to recognize data disk cartridge interchangeably, the operating system must be updated with its new cartridge information. The operating system must be made aware of the new cartridge. It uses the directory from the new cartridge that has been inserted.

- On Apple Macintoshes, grab icon and move icon to Trash Can to allow removal of cartridge.
- **CAUTION •**
IF A CARTRIDGE IS CHANGED WITHOUT UPDATING THE SYSTEM MEMORY WITH THE NEW DIRECTORY INFORMATION, CORRUPTION OF DATA MAY OCCUR.

- **NOTE •**
Reboot the computer to reset operating system after cartridge changes to insure that the computer's operating system is aware of the cartridge change.
- **NOTE •**
SyQuest provides a Software Device Driver for PC systems to allow the system to recognize the cartridge change. Software Device Drivers are available from SyQuest for a reasonable charge for the PC.

Cartridge Handling**Cartridge Handling****3.3 WRITE PROTECTING THE CARTRIDGE**

The disk cartridge is equipped with a yellow or a red write protect cylinder on the lower left side of plastic case. Refer to Figure 3-3.

- To write-protect the cartridge, turn the cartridge over and rotate the circular yellow/red cylinder clockwise using a small screwdriver or coin.

* clockwise

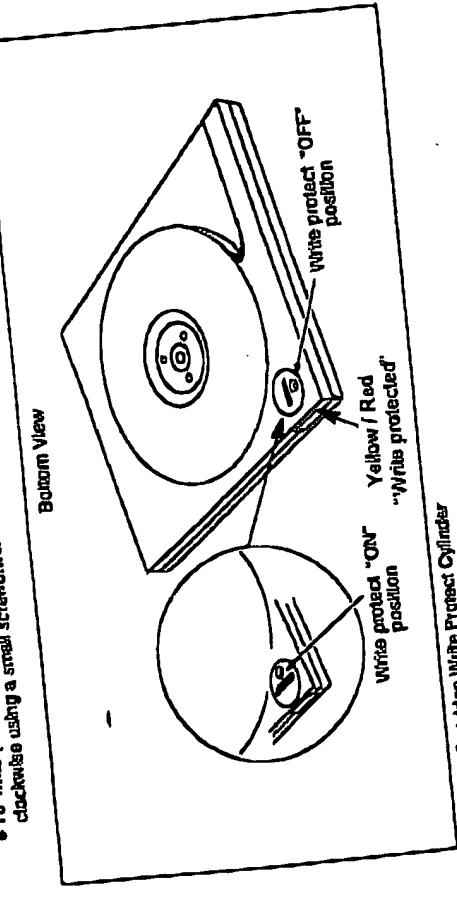


Figure 3-3. Cartridge Write Protect Cylinder

3.4 OPERATING SYSTEM VERSIONS

Avoid the use of different versions of operating systems (Example DOS 2.1 & DOS 3.1). Using different levels of DOS to写入和格式化 may lead to loss of cartridges interchangeably.

3.5 CARTRIDGE IDENTIFICATION

The SQ400 cartridge can be identified by the labels on the yellow write-protect indicator and the SQ400 (44 MB) with red write protect indicator and the SQ510 (44 MB) with yellow write protect indicator. This is used to differentiate between the SQ400 (44 MB) with red write protect indicator and the SQ510 (44 MB) with yellow write protect indicator.

3-3

3-4

3-5

3-6

3-7

3-8

3-9

3-10

3-11

3-12

3-13

3-14

3-15

3-16

3-17

3-18

3-19

3-20

3-21

3-22

3-23

3-24

3-25

3-26

3-27

3-28

3-29

3-30

3-31

3-32

3-33

3-34

3-35

3-36

3-37

3-38

3-39

3-40

3-41

3-42

3-43

3-44

3-45

3-46

3-47

3-48

3-49

3-50

3-51

3-52

3-53

3-54

3-55

3-56

3-57

3-58

3-59

3-60

3-61

3-62

3-63

3-64

3-65

3-66

3-67

3-68

3-69

3-70

3-71

3-72

3-73

3-74

3-75

3-76

3-77

3-78

3-79

3-80

3-81

3-82

3-83

3-84

3-85

3-86

3-87

3-88

3-89

3-90

3-91

3-92

3-93

3-94

3-95

3-96

3-97

3-98

3-99

3-100

3-101

3-102

3-103

3-104

3-105

3-106

3-107

3-108

3-109

3-110

3-111

3-112

3-113

3-114

3-115

3-116

3-117

3-118

3-119

3-120

3-121

3-122

3-123

3-124

3-125

3-126

3-127

3-128

3-129

3-130

3-131

3-132

3-133

3-134

3-135

3-136

3-137

3-138

3-139

3-140

3-141

3-142

3-143

3-144

3-145

3-146

3-147

3-148

3-149

3-150

3-151

3-152

3-153

3-154

3-155

3-156

3-157

3-158

3-159

3-160

3-161

3-162

3-163

3-164

3-165

3-166

3-167

3-168

3-169

3-170

3-171

3-172

3-173

3-174

3-175

3-176

3-177

3-178

3-179

3-180

3-181

3-182

3-183

3-184

3-185

3-186

3-187

3-188

3-189

3-190

3-191

3-192

3-193

3-194

3-195

3-196

3-197

3-198

3-199

3-200

3-201

3-202

3-203

3-204

3-205

3-206

3-207

3-208

3-209

3-210

3-211

3-212

3-213

3-214

3-215

3-216

3-217

3-218

3-219

3-220

3-221

3-222

3-223

3-224

3-225

3-226

3-227

3-228

3-229

3-230

3-231

3-232

3-233

3-234

3-235

3-236

3-237

3-238

3-239

3-240

3-241

3-242

3-243

3-244

3-245

3-246

3-247

3-248

3-249

3-250

3-251

3-252

3-253

3-254

3-255

3-256

3-257

3-258

3-259

3-260

3-261

3-262

3-263

3-264

3-265

3-266

3-267

3-268

3-269

3-270

3-271

3-272

3-273

3-274

3-275

3-276

3-277

3-278

3-279

3-280

3-281

3-282

3-283

Maintenance

This chapter describes the maintenance procedures for the SyQuest Removable Disk Drive. The SyQuest disk drives do not require a scheduled preventive maintenance (PM) cycle. The environment and the user handling procedures will determine the necessity of a cleaning cycle.

Always store the data cartridge in the supplied protective cartridge case.

Cartridge Handling

- **NOTE** •
The SQ5110C writes on SQ400 cartridges using multiple pass writes. This write is slow when directly compared to writing on SQ800 cartridges.
- The SQ5110C does not support the optional SCSI Format command on the SQ400 cartridge.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.